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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,986	12/24/2003	Akihiro Mochizuki	350292001900	3442

7590

09/20/2005

Barry E. Bretschneider  
Morrison & Foerster LLP  
Suite 300  
1650 Tysons Boulevard  
McLean, VA 22102

EXAMINER

WANG, GEORGE Y


ART UNIT

PAPER NUMBER

2871

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/766,986	MOCHIZUKI ET AL. 	
	<b>Examiner</b>	<b>Art Unit</b>	
	George Y. Wang	2871	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 30 June 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) 8-29 and 31 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/29/04</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Claims 8-29 and 31 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected LCD species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on June 30, 2005.

### ***Claim Objections***

2. Claim 30 is objected to because of the following informalities: It recites the same exact limitation and has the same dependency as claim 2. Appropriate correction is required. Note: for the purposes of examination, claim 30 is treated accordingly with the treatment of claim 2.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5 and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Patel (U.S. Patent No. 5,172,257).

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5. As to claim 1, Patel disclose a liquid crystal (LC) device comprising at least a pair of substrates (fig. 1, ref. 10, 12), a liquid crystal material disposed between the pair of substrates (26), where the molecular initial alignment in the LC material has a parallel or almost parallel direction with respect to the alignment treatment direction for the LC material and the LC material shows almost no spontaneous polarization which is perpendicular to the pair of substrates wunder the absence of an externally applied voltage (col. 3, lines 1-23).

6. Regarding claims 2 and 30, Patel discloses the LC device as recited above where the LC material is a ferroelectric LC material (26; col. 3, lines 19-20).

7. As to claims 3-5, Patel discloses the LC device as recited above where the LC molecular alignment is conducted by buffing (col. 3, lines 1-23) and in conjunction with a LC molecular alignment material providing low surface pretilt angle of 1.5 degrees or less (col. 6, lines 25-29; col. 2, lines 10-14).

### ***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Patel in view of Kitayama et al. (U.S. Patent No. 5,583,682, hereinafter "Kitayama").

Patel discloses the LC device as recited above, however, the reference fails to specifically disclose that the LC material having a bookshelf or quasi-bookshelf structure and where the helical pitch at the ferroelectric LC phase is 1.2 times or larger than the panel gap.

Kitayama discloses an LC device where the LC material comprises a bookshelf or quasi-bookshelf structure (col. 3, lines 53-65) and where the helical pitch at the ferroelectric LC phase is 1.2 times or larger than the panel gap (col. 4, lines 23-26).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have for the LC material to have a bookshelf or quasi-bookshelf structure and where the helical pitch at the ferroelectric LC phase is 1.2 times or larger than the panel gap since one would be motivated to keep the LC at low temperatures

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(col. 3, line 25) by compensating distortion or deformation due to shrinkage during structural changes (col. 4, lines 1-7) in order to minimize deterioration in display characteristics and problems with low temperature storage (col. 3, lines 25, 48-51). Ultimately, this serves to provide an LC device with improved gradation display characteristics (col. 2, lines 8-10).

### ***Conclusion***

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Y. Wang whose telephone number is 571-272-2304. The examiner can normally be reached on M-F, 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on 571-272-2293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

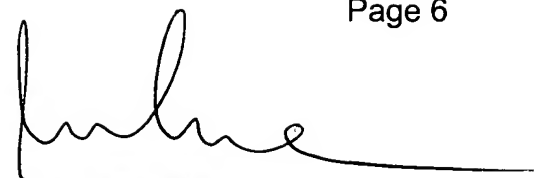
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September 16, 2005

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A handwritten signature in black ink, appearing to read 'NGUYEN', with a long horizontal flourish extending to the right.

**NGUYEN**  
**PRIMARY EXAMINER**